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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/477,943	01/05/2000	JE-HSIUNG LAN	WHOVIS.014A	9959

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EXAMINER	
AHMED, SAMIR ANWAR	
ART UNIT	**PAPER NUMBER**
2623	20

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/477,943	LAN ET AL.	
	Examiner	Art Unit	
	Samir A. Ahmed	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-81* is/are pending in the application.

4a) Of the above claim(s) *4,5,12-61,63-65 and 67-81* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-11,62 and 66* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The amendment filed 11/03/03 have been entered and made of record.

2. Applicant's election of species B (claims 2-3, and 6-11) in the reply filed on 11/03/03 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

3. The Examiner disagrees that independent claims 72, 73 and 79 are generic claims. While independent claims 1, 62, 66, are generic claims that read on all the species, independent claims 72, 73 and 79 are not generic claims. Claims 72, 79 read on the species of Figs 5-9 and claim 73 reads on the species of Fig. 14.

4. Claim dependency is not correct and it is still not corrected as the Examiner requested several times. Claims 47, 50-56, 58, 60-61 are method claims that depend from claim 45 which is a system claim. Claims 63, 65 are a fingerprint sensor that depends from method claim 61. Claims 67-71 are an optical sensor that depends from claim 65, which is a fingerprint sensor. Correction of dependency is required.

5. Claims 4-5, 12-61, 63-65, 67-81 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11/03/03.

Claim Objections

6. Claim 1 is objected to because of the following informalities: "A an optical module" on line 1 should be changed to --an optical module--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 62 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 62 recites, "a source of optical radiation disposed on one side of the transparent material", on lines 4-5, and recites, "detectors disposed on one side of the transparent material" on line 7. It is not clear whether "one side of the transparent material" on line 7 is the same or different from "one side of the transparent material" on lines 4-5.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-3, 6, 11, 66 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujieda et al. (U.S. Patent 5,446,290).

As to claim 1, Fujieda discloses A an optical module comprising:

a transparent material having a first side with a contact surface which receives a fingertip of a user (Figs. 4 and 7, item 13, col. 4, line11-15);

a source of optical radiation disposed on a second side of the transparent material, the source directing the radiation through the transparent material for reflection by the fingertip on the contact surface (Figs. 4 and 7, item 11, col. 4, lines 45-52); and

detectors disposed on the second side of the transparent material, the detectors positioned to receive radiation reflected by the fingertip (Figs. 4 and 7, item 24, col. 4, lines 52-55) and generating electrical signals in response to the detected radiation [the photo-sensitive elements 24 are photodiodes (col. 4, lines27-29), photodiodes inherently convert light radiation to electrical signal].

As to claim 2, Fujieda further discloses, further comprising a substrate having a first surface facing the source of optical radiation [Figs. 4 and 7, substrate 21 having a bottom surface (first surface) facing light source 11].

As to claim 3, Fujieda further discloses, wherein the substrate is disposed between the detectors and the source of optical radiation, the detectors facing the contact surface which surface receives the fingertip [Figs. 4 and 7, substrate 21 is disposed between detectors 24and light source 11, detectors 24 facing the optical element 13 (contact surface) that receives the finger].

As to claim 6, Fujieda further discloses, wherein the source of optical radiation includes an electroluminescent light source [planer light source 11 is an EL (electroluminesent) light emitting element (col. 4, lines 19-22).

As to claim 11, Fujieda further discloses, wherein the source of optical radiation includes an electroluminescent panel [light source 11 is an EL (electroluminesent) light emitting element and is a planer light source (panel) (col. 4, lines 19-22, Figs 4, 7)].

As to claim 66 refer to claim 1 for their common features. Fujieda further discloses the source being substantially planar [a planer light source 11 (col. 4, lines 19-22, Figs 4, 7)] and having an emitting area that is approximately the same size as the surface of the transparent material [Figs. 4 and 7 show the planer light source 11 having the same size as the optical element 13 (surface of the transparent material)].

11. Claim 62 is rejected under 35 U.S.C. 102(b) as being anticipated by Fujieda et al. (U.S. Patent 5,635,723).

As to claim 62 {as best understood by the Examiner], Fujieda discloses a fingerprint sensor, comprising:

a transparent material having a surface which receives a fingertip of a User [Fujieda is improving the structure of the image sensor 2 (shown in Fig. 5) of a prior art fingerprint sensor 5 shown in Fig. 4. Fig. 4, item 3 is an optical part that receives user finger (col. 4, lines 42-45); the optical part is a transparent substrate (col. 6, lines 29-30)]

a source of optical radiation disposed on one side of the transparent material, the source directing the radiation through the transparent material for reflection by the

fingertip [Fig. 4, item 1 is a plane light source (optical source of radiation) on one side of the optical part 3 (col. 4, lines 1-3), that radiates light to the optical part having passed the two dimensional image sensor 2 and guide the reflected light from the finger to the photoelectric elements 10 on the sensor 2 (col. 4, lines 42-45)];

detectors disposed on one side of the transparent material, the detectors positioned to receive radiation reflected by the finger [Fig.4, item 2 is a two dimensional image sensor capable of allowing the light from the light source to pass through and includes a plurality of photometric elements 10 (col. 4, lines 4-9), i.e. on the same side of the light source, the photometric elements 10 receive light reflected from the finger (col. 4, lines 42-45)] the detectors generating electrical signals in response to the detected radiation [the photometric elements (detectors) outputting a photoelectric signal in response to the incident light, the photoelectric signal is a current (electrical signals) flows through the data lines (col. 5, lines 50-52)]; and

a circuit which converts the electrical signals into an electronic representation of a fingerprint [the detection circuit 27 reads the distribution of the reflected light from the finger as a two dimensional image (col. 6, lines 53-55), the image is generated by photoelectric elements 21 (photodiodes) and MOS transistors (electronic devices) shown in Fig. 7 and it is an electronic fingerprint image].

Claim Rejections - 35 USC § 103

12. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujieda et al. (U.S. Patent 5,446,290) as applied to claim 6 above, and further in view of Paul Vachris et al. (WO 99/12472).

As to claims 7-10, Fujieda discloses a planer light source 11, which employs an EL (electroluminescent) light emitting element (col. 4, lines 19-22). Fujieda does not specifically disclose, wherein the electroluminescent light source includes an organic electroluminescent material, wherein the electroluminescent material includes a light emitting polymer, wherein the electroluminescent light source includes an inorganic electroluminescent material, or wherein the inorganic electroluminescent material includes phosphor. However the use of different types of electroluminescent materials as light sources in fingerprint devices is well known in the art as disclosed by Vachris. Vachris discloses an electroluminescent device for imaging a finger using organic or inorganic electroluminescent material (Abstract). The light emitting layer of the inorganic type of electroluminescent material may include phosphor (col. 4, lines 13-15). The light emitting layer of the organic type of electroluminescent material may include a light-emitting polymer (col. 5, lines 9-11). Electroluminescence is a highly efficient method for the generation of light within the visible band of the electromagnetic energy spectrum and one of ordinary skill in the art at the time the invention was made would be motivated to use different types (organic and inorganic) of that highly efficient light generating electroluminescent material as taught by Vachris in Fujieda's electroluminescent light emitting element of the fingerprint for conventional reasons such as the availability of the different types of electroluminescent material, the cost of the different types of electroluminescent material, and the flexibility of accommodating different sensor applications with different types of electroluminescent materials.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samir A. Ahmed whose telephone number is 703-305-9870. The examiner can normally be reached on Mon-Fri 8:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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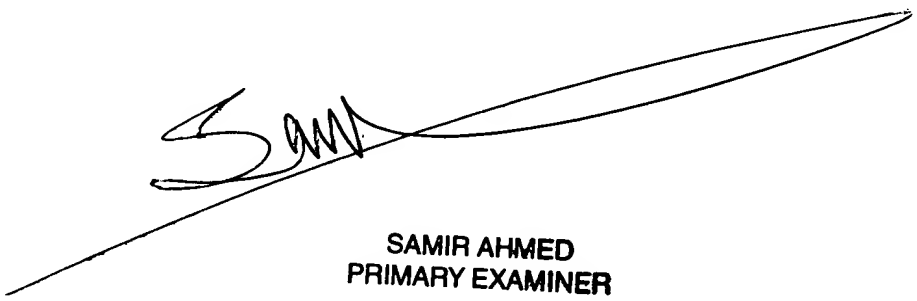

SAMIR AHMED
PRIMARY EXAMINER